
Arizona's School Accountability System 2010 *Technical Manual*



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Volume I: AZ LEARNS Achievement Profiles

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1. Introduction

In November of 2001, Arizona voters approved Proposition 301 which provided funds to the Arizona Department of Education (ADE) to develop “a system to measure school performance based on student achievement, including student performance on the AIMS test.” The legislative requirements for the accountability system are stated in section 15-241 (ARS § 15-241) of the Arizona Revised Statutes. The accountability system created to satisfy the statute is referred to as the Arizona LEARNS. The school evaluation given by ADE to each school is referred to as the school’s achievement profile. This manual describes the method and processes used to generate the 2009 AZ LEARNS achievement profiles. It provides formulas, parameters, and business rules that make up the profile calculation. Its intent is to document and explain the methods used and justify the policies adopted.

What’s New for the 2010 AZ LEARNS Achievement Profiles

There were a few changes to the AZ LEARNS school evaluation formula in 2010. These changes were because of changes in testing. The AIMS writing test was not administered in all grades, and the new math test was administered.

Changes due to writing test in fewer grades

In 2010, no writing tests were administered in grades 3, 4, and 8. The calculation of points for percent passing and improvement had to be changed so that if a school did not have enough test scores to be evaluated on a subject, the other subjects were weighted more. The changes modified the formula to deal with not having writing scores for these three grades.

In the calculation of percent exceeding for a highly performing or excelling profile, the state averages and standard deviations used for calculating the z-scores for grades 3, 4, and 8 were recalculated using 2006 test results, excluding writing.

Changes due to the new math test

The new math test was administered in the spring of 2010.

The parameters for percent passing and percent improvement were reset based on the new math test.

Individual student growth (the Measure of Academic Progress) on math was not included in the AZ LEARNS evaluations for 2010.

ADE reset the math benchmark parameters used for the status, growth/improvement, and percentage of students of students exceeding using the same method used the last time the parameters were established in 2005 and 2006.

The tables below show how the benchmark parameters were set for status and growth/improvement. For status points, benchmarks were set for each grade at the 90th, 75th, average, 25th, and 10th percentiles of performance. So for third grade, the benchmarks were set at 95 percent, 89 percent, 79 percent, 65 percent, and 51 percent. This implies that in 2005 at least 79% of 3rd graders were passing AIMS in at least one-half of the schools in the state, and 95 percent were passing in the top 10 percent of schools in the state. Since 2005, a school with a passing rate of 95 percent earned 6 points; a school with a passing rate of 89 percent earned 5 points; etc. These benchmarks vary by grade.

The method is almost the same for the growth/improvement parameters except that the benchmarks were set at intervals of ½ standard deviations above and below the state average.

| Table 1.1 Status Point Benchmarks | | | | | |
|-----------------------------------|---|---------------|-------------------------|---|---------------|
| Status | | | Improvement/Growth | | |
| Benchmark | Current Parameter (3 rd Grade) | Points Earned | Benchmark | Current Parameter (3 rd Grade) | Points Earned |
| | | 6 | | | 6 |
| 90 th percentile | 95% | 5 | +1 standard deviation | 18 | 5 |
| 75 th percentile | 89% | | +1/2 standard deviation | 10 | |
| Average | 79% | 4 | Average | 1 | 4 |
| 25 th percentile | 65% | 3 | -1/2 standard deviation | -8 | 3 |
| 10 th percentile | 51% | 2 | -1 standard deviation | -16 | 2 |
| | | 1 | | | 1 |
| | | | | | |

The state averages and standard deviations used for calculating the z-scores were recalculated using 2006 test results for reading and writing and 2010 results for math.

The changed parameters for status, improvement and z scores are below in Tables 1.2, 1.3, and 1.4.

| Table 1.2 New Status Cut Points for Math | | | | | | | |
|--|---------|----------------|----------------|----------------|----------------|----------------|----------------|
| Grade | Subject | Status Group 1 | Status Group 2 | Status Group 3 | Status Group 4 | Status Group 5 | Status Group 6 |
| 3 | MATH | <40% | 40% | 52% | 66% | 79% | 87% |
| 4 | MATH | <37% | 37% | 50% | 65% | 78% | 87% |
| 5 | MATH | <31% | 31% | 44% | 60% | 73% | 84% |
| 6 | MATH | <30% | 30% | 43% | 59% | 73% | 84% |
| 7 | MATH | <29% | 29% | 42% | 58% | 72% | 83% |
| 8 | MATH | <28% | 28% | 41% | 56% | 70% | 81% |
| 10 | MATH | <11% | 11% | 22% | 40% | 61% | 77% |

| Table 1.3 New Improvement Cut Points for Math | | | | | | | |
|---|---------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Grade | Subject | Improvement Group 1 | Improvement Group 2 | Improvement Group 3 | Improvement Group 4 | Improvement Group 5 | Improvement Group 6 |
| 3rd - 8th | MATH | <-14 | -14 | -10 | -5 | 0 | 4 |
| HS | MATH | <-13 | -13 | -9 | -4 | 0 | 4 |

| Table 1.4 Parameters for Calculating Z Scores | | |
|---|---------|--------------------|
| Grade | Average | Standard Deviation |
| 3 | 0.17 | 0.12 |
| 4 | 0.16 | 0.11 |
| 5 | 0.11 | 0.1 |
| 6 | 0.14 | 0.12 |
| 7 | 0.12 | 0.12 |
| 8 | 0.12 | 0.11 |
| 10 | 0.07 | 0.12 |

Persistently Lowest-Achieving schools will be designated as Underperforming for AZ LEARNS.

Schools identified as Persistently Lowest-Achieving (PLA) based on the federal guidelines were designated as underperforming in the 2010 profile.

At the May 24, 2010 meeting the State Board of Education approved the following policy:

“Schools that meet the federally-approved state definition of Persistently Lowest-Achieving and have ELL reclassification rates lower than 30 percent shall receive an AZ LEARNS profile of underperforming.”

As a result of the American Recovery and Reinvestment Act, the U.S. Department of Education required that states identify Persistently Lowest-Achieving Schools.

Please refer to the Arizona Department of Education web page below for the definition of Persistently Lowest-Achieving (PLA) and the current list of PLA schools:

<http://www.ade.az.gov/azlearns/aypdeterminations.asp>

2. Overview of the AZ LEARNS Evaluation System

This section provides an overview of how AZ LEARNS achievement profiles are determined. More detailed discussions of the methodology used to determine the profiles, including descriptions of equations, algorithms, and data used are given in subsequent chapters.

Arizona law (ARS § 15-241) mandates that the Arizona Department of Education shall compile an annual achievement profile for each public school. It specifies that the profiles of schools serving grades K-8 shall be based on:

- Percent of students who pass AIMS.
- Arizona Measure of Academic Progress (MAP).
- Performance on the English language proficiency test.

The law specifies that the profiles of high schools shall be based on:

- Percent of students who pass AIMS.
- Dropout rate
- Graduation rate
- Performance on the English language proficiency test.

Starting in 2008, a school that serves both grades K-8 and high school receives a unified achievement profile based on all of the above performance measures.

The law also calls for the ADE to use a research based methodology that shall:

- Include performance of pupils at all achievement levels
- Account for pupil mobility
- Account for the distribution of pupil achievement
- Include longitudinal indicators of academic performance.

A research based methodology is defined as “the systematic and objective application of statistical and quantitative research principles to determine a standard measurement of acceptable academic progress for each school”.

The law also calls for a system of parallel achievement profiles for accommodation schools/alternative schools as defined by the Board of Education.

General Process to Calculate an Achievement Profile

The achievement profile for a school serving grades 3-8 consists of the following performance measures:

1. A status measure based on the performance of students on all three sections of the AIMS (reading, writing, and mathematics) in the current year.
2. A measure of improvement in aggregate student performance on the AIMS compared to the baseline year.
3. A measure of growth in individual student performance. This is the Measure of Academic Progress (MAP).
4. A measure of student performance on the state's English language proficiency assessment: AZELLA.
5. In order to create the incentive for schools to improve the achievement of average and above-average students, a school cannot earn the highly performing or excelling labels unless the percentage of its students exceeding the standard on AIMS met specific thresholds.

The achievement profile for a high school is made up of all of the above components except for measure 3 (MAP). In addition, the following performance measures are used for high schools:

6. Dropout rate.
7. Graduation rate.

Schools are awarded scale score points based on their performance on measures one through four, six, and seven. Scale score points are then summed up for each school and compared to a scale that relates scale score points to the five profile labels: excelling, highly performing, performing plus, performing, and underperforming. Performance measure five is then examined to determine if the school has earned the highest labels of highly performing or excelling.

Note: Prior to 2009, one additional point was available to schools for “making” AYP. To compensate for the possible loss of this point the student-level growth formula was modified to give greater weight to the available MAP points.

3. Timeline

Districts and charter holders (Local Education Agencies - LEAs) are solely responsible for submitting the data necessary for calculating achievement profiles for their schools and for ensuring its accuracy. From June 21, 2010 through June 30, 2010 schools and LEAs were given an opportunity to review and correct their testing data through on-line applications. The primary purpose of the process was to allow LEAs to correct the information for individual students. From March 15, 2010 through May 28, 2010 schools and LEAs were given the opportunity to review and correct the data used for calculating the five-year graduation rate and dropout rates used in the AZ LEARNS profile.

All program membership and demographic information relevant to AZ LEARNS profiles were taken by matching test records to the state's SAIS database of student records. Consequently the only information that schools needed to correct in the ADE AIMS testing file were students' SAIS IDs (needed for matching). If program membership or other information was incorrect, schools and districts were required to correct it in the SAIS database. Schools were not allowed to correct the indicators for alternate testing modifications.

IMPORTANT NOTE: The criteria used to select AIMS scores for AZ LEARNS profiles differ from the criteria used to select scores for adequate yearly progress under NCLB. Indeed, the criteria differ among the separate components of the AZ LEARNS evaluation. The criteria also differ from the scores provided to schools by the testing contractor, and the scores publicly reported by ADE, which are available here: <http://azed.gov/researchpolicy/AIMSResults/>.

Timeline

The timeline for AZ LEARNS Achievement Profile process was:

- March 15, 2010. Start of statistical review and appeals of graduation rate and dropout rate data.
- June 21, 2010. Opening of test data verification process.
- April 30, 2010. Closing of application process for alternative schools.
- May 28, 2010. Closing of statistical review and appeals of graduation rate and dropout rate data.
- June 21, 2010. Preliminary release of AZ LEARNS achievement profiles for all schools.
- June 21, 2010. Opening of window for appeals submissions.
- June 30, 2010. Closing of appeals window for all schools.
- July 28, 2010. Public release of AZ LEARNS achievement profiles for all schools.

4. Calculation of AIMS Status and Growth Points

In the AZ LEARNS profile, schools are awarded scale score points based on student performance on the AIMS. Points are determined by performance in the current year, and improvement in student performance from the baseline year.

Awarding Status Points

The following method is used to calculate status points for every subject and grade offered by a school in which the AIMS test is administered. First, calculate the percent passing in the current year. The percentage is compared to the scale given in table 4.1 which in turn gives the status points achieved for the subject and grade.

$$\text{Percent Passing in the current year} = \frac{\text{\# Students Passing AIMS in the current year}}{\text{\# Students tested in the current year}}$$

The points are rounded to the nearest hundredth e.g. .675 = .68; .672 = .67.

Data Used

A student's score is excluded from the calculation if any of the following criteria are met:

1. The student was not matched to SAIS with a valid ID.
2. Student received no score on the test.
3. The student received an alternate accommodation on the test.
4. Student was not English proficient. A student was considered not proficient if it was indicated that she was a participant in the English language learner program for three years or less.
5. The student was not enrolled in the school for the full academic year. A student was considered enrolled for the full academic year if she enrolled in a school during the first 10 school days of the school year and remained enrolled up through the testing date.

The calculation for high schools includes all students in grades 10 through 12 who have taken the AIMS either in the fall or spring. If a high school student took the test twice in a school year in the same school, the higher of the student's two scores was used.

Table 4.1 Status Points Awarded

| Grade | Subject | Status Points 1 | Status Points 2 | Status Points 3 | Status Points 4 | Status Points 5 | Status Points 6 |
|-------|---------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 3 | Math | <40% | 40% | 52% | 66% | 79% | 87% |
| 3 | Read | < 46 | 46 to 59 | 60 to 73 | 74 to 84 | 85 to 92 | ≥ 93 |
| 4 | Math | <37% | 37% | 50% | 65% | 78% | 87% |
| 4 | Read | < 40 | 40 to 53 | 54 to 69 | 70 to 81 | 82 to 90 | ≥ 91 |
| 5 | Math | <31% | 31% | 44% | 60% | 73% | 84% |
| 5 | Read | < 42 | 42 to 56 | 57 to 72 | 73 to 84 | 85 to 92 | ≥ 93 |
| 5 | Writ | < 47 | 47 to 57 | 58 to 69 | 70 to 80 | 81 to 87 | ≥ 88 |
| 6 | Math | <30% | 30% | 43% | 59% | 73% | 84% |
| 6 | Read | < 38 | 38 to 52 | 53 to 69 | 70 to 82 | 83 to 91 | ≥ 92 |
| 6 | Writ | < 49 | 49 to 60 | 61 to 73 | 74 to 83 | 84 to 90 | ≥ 91 |
| 7 | Math | <29% | 29% | 42% | 58% | 72% | 83% |
| 7 | Read | < 41 | 41 to 54 | 55 to 69 | 70 to 82 | 83 to 90 | ≥ 91 |
| 7 | Writ | < 64 | 64 to 73 | 74 to 82 | 83 to 89 | 90 to 94 | ≥ 95 |
| 8 | Math | <28% | 28% | 41% | 56% | 70% | 81% |
| 8 | Read | < 35 | 35 to 48 | 49 to 65 | 66 to 79 | 80 to 88 | ≥ 89 |
| HS | Math | <11% | 11% | 22% | 40% | 61% | 77% |
| HS | Read | < 16 | 16 to 28 | 29 to 46 | 47 to 65 | 66 to 79 | ≥ 80 |
| HS | Writ | < 18 | 18 to 30 | 31 to 48 | 49 to 67 | 68 to 80 | ≥ 81 |

A school is awarded status points for each subject/grade it offers in which the AIMS test is administered.

Example. In the current year, 66 percent of the students in Gila Monster Elementary passed the math portion of the third grade AIMS. This value places the subject/grade in Status grouping three. Gila Monster Elementary has earned three status points for this particular subject/grade.

Awarding Improvement Points

Determining a school's improvement points for each subject/grade combination is based on the average of the annual changes in the difference between the percentage of students passing and the percentage of students scoring "falls far below" on the AIMS. The improvement points earned are determined by the average of the annual changes from 2006 or when a school opened, whichever is latest. Improvement points are awarded for all grades three through eight and high school. No minimum group size is applied.

Computation of the Average Annual Change in Difference of Achievement

Improvement points for a subject/grade are calculated in the following five steps:

1. For every year for which the school was open, or until 2006, whichever is latest, for each subject/grade combination the percentage of student passing and the percentage of students scoring “falls far below” is computed.
2. The difference in these percentages is then taken.
3. The annual change between the differences is found.
4. The average of the annual changes is determined.
5. The average of the annual changes is compared to the new Improvement Points Table (table 4.4) to determine the AZ LEARNS points for the subject/grade combination.

All values are rounded to the nearest hundredth e.g. $.675 = .68$; $.672 = .67$.

Data Used

The rules for using student scores for the growth measure are the same as for the status measure. For high school students who took the test multiple times, each student’s highest score in each year is used.

Example. The following example demonstrates how growth points are calculated for a single grade and subject. Table 4.2 shows the percentage of students passing and scoring “falls far below”, and the difference in the two percentages from 2007 to 2010 of AIMS scores for a single subject and grade for a hypothetical school.

| Table 4.2. Percentage of Students | | | |
|-----------------------------------|-----------------|-------------------------|------------|
| Year | Percent Passing | Percent Falls Far Below | Difference |
| 2007 | 52 | 18 | 34 |
| 2008 | 54 | 17 | 37 |
| 2009 | 57 | 15 | 42 |
| 2010 | 60 | 10 | 50 |

Table 4.3 shows the year-to-year changes in the differences from table 4.2.

| Table 4.3. Year-to-Year Change in Percentages | | |
|---|------------|---------------------|
| Years | Difference | Year-to year change |
| 2007 to 2008 | 37 - 34 | 3 |
| 2008 to 2009 | 42 - 37 | 5 |
| 2009 to 2010 | 50 - 42 | 8 |

The growth measure is the average $(3 + 5 + 8)/3 = 5.3$.

The improvement point thresholds are given in table 4.4. This table is used to convert the average annual improvement measure to AZ LEARNS improvement points.

| Table 4.4. Improvement Points | | | | | | | |
|-------------------------------|---------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Grade | Subject | AZ LEARNS Points 1 | AZ LEARNS Points 2 | AZ LEARNS Points 3 | AZ LEARNS Points 4 | AZ LEARNS Points 5 | AZ LEARNS Points 6 |
| 3 - 8 | Math | <-14 | -14 | -10 | -5 | 0 | 4 |
| 3 - 8 | Read | < -14 | -14 to -8 | -7 to 0 | 1 to 7 | 8 to 14 | ≥ 15 |
| 5-7 | Writ | < -16 | -16 to -8 | -7 to 0 | 1 to 11 | 12 to 20 | ≥ 21 |
| HS | Math | <-13 | -13 | -9 | -4 | 0 | 4 |
| HS | Read | < -12 | -12 to -5 | -4 to 4 | 5 to 13 | 14 to 21 | ≥ 22 |
| HS | Writ | < -10 | -10 to -2 | -1 to 7 | 8 to 16 | 17 to 25 | ≥ 26 |

Calculation of Subject/Grade Scale Points from AIMS

The total scale score points derived from AIMS performance for each subject/grade combination are calculated by adding the status points awarded to the AZ LEARNS improvement points awarded. A 70 percent weight is given to the school's strongest point value (status or improvement) and a 30 percent weight to the other point value.

Example. In third grade mathematics, Gila Monster Elementary has earned three status points and four improvement points. Because it has earned more scale points for its improvement, the improvement points are given a 70 percent weight and the status points are given a 30 percent weight. Thus, the total scale points earned for third grade math are $(3 \times 0.3) + (4 \times 0.7) = 3.7$.

Example. In mathematics, Desert Mountain Vista High School has earned five status group scale points and two improvement points. Because it has earned more scale points for its status, the status scale points are given a 70 percent weight and the improvement points are given a 30 percent weight. Thus, the total scale points earned for math are $(5 \times 0.7) + (2 \times 0.3) = 4.1$.

If a subject/grade group earned six status points, 100 percent of the weight is given to the status points. As long as data is available for the past two years, for a subject/grade combination, improvement points are both computed and combined with the status points.

Example. Gila Monster Elementary is missing data for fifth grade writing for both 2006 and 2007 but has scores for 2008 and 2009. Its status points for that subject/grade combination put it in status group five and it received three improvement points. Because it has earned more scale points for its status, the status points are given a 70 percent weight and the improvement points are given a 30 percent weight. Thus, the total scale points earned for fifth grade writing are $(5 \times 0.7) + (3 \times 0.3) = 4.4$.

Example. The newly opened High Mountain Elementary has no test scores for any year prior to 2010. Its status points for fourth grade reading put it in status group three but received no improvement points because there was no comparison year. 100 percent weight is given to the status group in this case. Thus it receives three scale points for fourth grade reading.

The points derived from AIMS for all subject/grade combinations for a school are averaged across grades by subject and added to the scale score values for other performance measures.

Special Cases

Missing Data. If a school is missing current year AIMS test data for a subject/grade combination it offers, it receives zero growth/status scale points for that subject/grade for the achievement profile calculation for the year.

Small Grades. Subject/grade combinations with less than ten students meeting the selection criteria in the current year were not evaluated and so receive zero growth/status scale points.

Second Look for Small Schools. Because of the high-stakes consequences of being labeled an underperforming school, and because of the uncertainty of measurement involved with small sample sizes, a school with a small number of students is given a “second look” if it faces the possibility of receiving an underperforming profile. If the preliminary label of a school is underperforming, then the AIMS scale score points for that school are recalculated for each subject/grade group that has less than 16 students. For each subject/grade combination with less than 16 students, the upper bound of the 95-percent confidence interval is used to calculate to which baseline group the school belongs. If the recalculated points move the school into a classification higher than underperforming, the school receives a profile performing, regardless of the points earned.

Let p = the percent of students in a group passing the AIMS and n =the number of students in the group. Then the equation for the upper bound of the 95 percent confidence interval (UB95) is:

$$UB95 = p + 1.96\sqrt{p(1-p)/n}.$$

As can be seen from the equation, the confidence interval depends upon the percent of students who passed the test and the number of students tested. Thus, the confidence interval will differ among grades, subjects, and schools.

The equation is an approximation of the confidence interval for a binomially distributed variable. It uses the standard normal distribution and is sufficiently accurate if the group size and percentage of students passing are large enough. For small values of n and small p , a more accurate estimate of the confidence interval is made using statistical tables that provide

confidence intervals for a binomially distributed variable.¹ The tables are applied using the rules given in table 4.5.

| Table 4.5. Rules for Determining UB95 for Small n and p | |
|--|--|
| If $n \geq 0$ and $n < 8$, and $p \geq 0.00$ and $p < 0.04$, then UB95=0.42; $p \geq 0.04$ and $p < 0.10$, then UB95=0.50; $p \geq 0.10$ and $p < 0.20$, then UB95=0.60. | If $n \geq 16$ and $n < 20$, and $p \geq 0.00$ and $p < 0.04$, then UB95=0.24; $p \geq 0.04$ and $p < 0.10$, then UB95=0.32; $p \geq 0.10$ and $p < 0.20$, then UB95=0.44. |
| If $n \geq 8$ and $n < 10$, and $p \geq 0.00$ and $p < 0.04$, then UB95=0.37; $p \geq 0.04$ and $p < 0.10$, then UB95=0.45; $p \geq 0.10$ and $p < 0.20$, then UB95=0.55. | If $n \geq 20$ and $n < 24$, and $p \geq 0.00$ and $p < 0.04$, then UB95=0.21; $p \geq 0.04$ and $p < 0.10$, then UB95=0.29; $p \geq 0.10$ and $p < 0.20$, then UB95=0.42. |
| If $n \geq 10$ and $n < 12$, and $p \geq 0.00$ and $p < 0.04$, then UB95=0.33; $p \geq 0.04$ and $p < 0.10$, then UB95=0.41; $p \geq 0.10$ and $p < 0.20$, then UB95=0.52. | If $n \geq 24$ and $n < 30$, and $p \geq 0.00$ and $p < 0.04$, then UB95=0.18; $p \geq 0.04$ and $p < 0.10$, then UB95=0.27; $p \geq 0.10$ and $p < 0.20$, then UB95=0.38. |
| If $n \geq 12$ and $n < 16$, and $p \geq 0.00$ and $p < 0.04$, then UB95=0.27; $p \geq 0.04$ and $p < 0.10$, then UB95=0.35; $p \geq 0.10$ and $p < 0.20$, then UB95=0.47. | If $n \geq 30$ and $n < 40$, and $p \geq 0.00$ and $p < 0.04$, then UB95=0.15; $p \geq 0.04$ and $p < 0.10$, then UB95=0.23; $p \geq 0.10$ and $p < 0.20$, then UB95=0.36. |

¹ Mansfield, Edwin. 1991. *Statistics for Business and Economics, 4th Edition*. New York: W.W. Norton and Company. 280-284.

5. The Measure of Academic Progress

The measure of academic progress (MAP) is a measure of individual student academic growth measured by performance on the AIMS reading test. (Writing is not included in the MAP analysis.) In 2010, AIMS math was not included in the MAP calculation due to changes in the test. It uses a conventional value-added approach to measuring student progress.

Calculating the number of points earned from MAP has three steps:

1. Individual expectations of one year's growth (OYG) are calculated for each student.
2. The expectation of OYG is subtracted from the actual growth achieved by the student to determine a growth index.
3. The average growth index for school is calculated by averaging growth indices for individual students across all grades and subjects. Schools are awarded AZ LEARNS points based on this average.

Actual growth, expected growth, and the growth index are expressed in AIMS scale score points.

The Growth Index

In order to control for a ceiling effect and for student mobility, the MAP analysis is done using a standard value-added model. The value-added model is used to calculate an estimate of the expected for each student for each subject. The expected growth is then subtracted from actual growth to determine a student's growth index.

Example. Student A scored 478 on the 6th grade reading test in 2009. Her expected growth for 7th grade in 2010 is 38. In 2010 she scores a 528 on the 7th grade reading test. Her actual growth is $528 - 478 = 50$. Her growth index is $50 - 38 = 12$.

Example. Student B scored 490 on the 4th grade reading test in 2009. His expected growth for 5th grade in 2010 is 12. In 2010 he scores a 500 on the 5th grade reading test. His actual growth is $500 - 490 = 10$. His growth index is $10 - 12 = -2$.

The results of the MAP analysis for students and schools are reported in terms of the growth index. Growth indices for individual students can be averaged across schools, grades, and subjects to measure performance.

Calculating Expected Growth

The expected growth for an individual student is calculated using the following formula:

$$\text{Expected Growth} = A + B \times (209 \text{ scale score}) + C \times (\text{FAY});$$

where $FAY = 1$ if the student has been enrolled for the full 2010 academic year and $FAY = 0$ if not. A student is considered to have been enrolled the full 2010 academic year if she has enrolled within the first two weeks of the school year and remained enrolled up to the first day of the testing window.

The parameters A, B, and C are given in the table below:

| Table 5.1. Parameters for Calculating Expected Growth for Reading | | | |
|---|----------|---------|--------|
| Student's Grade Current Year | A | B | C |
| 4 | 120.9638 | -0.2269 | 3.7108 |
| 5 | 153.1619 | -0.2879 | 4.106 |
| 6 | 105.8317 | -0.2016 | 4.343 |
| 7 | 88.3119 | -0.1492 | 5.1193 |
| 8 | 89.8856 | -0.1688 | 7.0786 |

Example. Student A scored 478 on the 6th grade reading test in 2009. She has been enrolled in her current school all year. Her expected growth for 7th grade in 2010 is $121.1295 + (-0.1896) * 478 + 7.1203 = 37.62 = 38$.

Example. Student B scored 490 on the 4th grade reading test in 2009. He has not been enrolled in his current school for the full year. His expected growth for 5th grade in 2010 is $153.1619 + (-0.2879) * 490 = 12.09 = 12$.

Awarding AZ LEARNS Points

The Growth Index for a school is calculated by averaging the student-level growth indices across all grades for math and reading. The number of AZ LEARNS points earned by a school is calculated with the following formula:

$$\text{AZ LEARNS points} = 5.9 + .22 * (\text{School's growth index.})$$

The scale is bounded at the bottom by 2. So if the result of the above formula is less than 2, a school would earn 2 points. No maximum is placed on the number of points a school may earn. This is to award schools that make outstanding growth with students. The point formula was re-developed for 2009 to compensate for the potential loss of an AYP point that was removed from the AZ LEARNS formula.

Example. School A's growth index is -1.7. The number of AZ LEARNS points awarded to the school is $5.9 + .22 * (-1.7) = 5.5$.

Example. School B's growth index is 3.2. The number of AZ LEARNS points awarded to the school is $5.9 + .22 * (3.2) = 6.6$.

Example. School C's growth index is -20.0. Since $5.9 + .22 * (-20.0) = 1.5$ is less than 2. The number of AZ LEARNS points awarded to the school is 2.

Schools without MAP

MAP is only evaluated for grades four through eight using student scores from grades three through eight. Schools do not receive points from MAP if they do not have a grade evaluated for MAP or if they have less than 16 scores in the MAP analysis. The AZ LEARNS profile scale thresholds were adjusted in 2009 for schools not being evaluated on MAP to compensate these schools for the potential loss of an AYP point that was removed from the AZ LEARNS formula.

6. Graduation and Dropout Rates

The rules for schools earning points for their graduation and dropout rates were updated in 2009 for the first time since 2003. High schools will continue to be able to earn a maximum of two points total for their graduation rate and dropout rate in their AZ LEARNS profiles.

Graduation Rate

The Graduation Rate is a five-year, longitudinal measure of how many students graduate from high school. The formula to calculate the one-year graduation rate (used to compute average annual growth and for determining the growth needed to earn points) is:

$$\text{One-year Graduation Rate} = \frac{\text{Number in cohort who graduated within five years}}{\text{Original cohort} + \text{Transfers in} - \text{Transfers out}}$$

The three-year average is calculated by taking the total number of combined five-year graduates for the most recent three graduating classes and dividing by the total number of students in the combined classes.

$$\text{Three-year Graduation Rate} = \frac{2008 + 2009 + 2010 \text{ five-year graduates}}{\text{Combined number of students in three adjusted cohorts}}$$

The graduation rate is rounded to two digits, e.g.: .705=.71; .704=.70.

A school can earn one AZ LEARNS scale point for its graduation rate in one of three ways:

1. If its three-year average graduation rate is 90 percent or greater.
2. If its three-year average graduation rate is less than 90 percent and its current year rate is greater than or equal to 74 percent, then a school will earn one point if the average annual growth of its graduation rate is 1 percentage point.
3. If its three-year average graduation rate is less than 90 percent and its current year rate is less than 74 percent, then a school will earn one point if the average annual growth of its graduation rate is 2 percentage points.

In 2009 the baseline year for graduation rate was moved to 2006 or the school's first year serving grade 12, whichever is latest. A school's annual average growth is calculated by subtracting the baseline year's rate from the current year's rate and dividing by the number of years spanned by the calculation.

$$\text{Average Annual Growth} = \frac{\text{Current one-year rate} - \text{Baseline one-year rate}}{\text{number of years in span}}$$

A school will not be evaluated on graduation rate until it serves grade 12 for two years. Additionally, there is a minimum cohort size of 15. Schools that are not evaluated on graduation rate will receive double the number of points earned via the dropout rate.

Dropout Rate

The dropout rate is an annual measure of how many students drop out of a school during a twelve-month reporting period. The formula to calculate the one-year dropout rate (used to compute average annual decrease and for determining the decrease needed to earn points) is:

$$\text{One-year Dropout Rate} = \frac{\text{\# of student who dropped out}}{\text{\# of students enrolled during the school year}}$$

The three-year average is calculated by taking the total number of dropouts for the most recent three years and dividing by the total number of students enrolled.

$$\text{Three-year Dropout Rate} = \frac{\text{total \# of dropouts for 2008, 2009, and 2010}}{\text{total \# of students enrolled in 2008, 2009, and 2010}}$$

Like the graduation rate, a school can earn one AZ LEARNS scale point for its dropout rate in one of three ways:

1. If the three-year average dropout rate is 6 percent or less, the target is automatically met.
2. If its three-year average dropout rate is greater than 6 percent and its current year rate is greater than or equal to 9 percent, then a school will earn one point if the average annual decrease of its dropout rate is 2 percentage points.
3. If its three-year average graduation rate is less than 6 percent and its current year rate is less than or equal to 9 percent, then a school will earn one point if the average annual decrease of its dropout rate is 1 percentage point.

In 2009 the baseline year for dropout rate was moved to 2006 or the school's first year of operation, whichever is latest. A school's annual average decrease is calculated by subtracting the baseline year's rate from the current year's rate and dividing by the number of years spanned by the calculation.

$$\text{Average Annual Decrease} = \frac{\text{Baseline one-year rate} - \text{Current one-year rate}}{\text{Number of years in span}}$$

A school will not be evaluated on dropout rate if it has less than 15 students in the group. Schools that are not evaluated on dropout rate will receive double the number of points earned via the graduation rate.

7. Evaluating Performance on the English Language Assessment

State law governing AZ LEARNS now requires that the “results of English language learners tests” be included as part of the AZ LEARNS school evaluation. {ARS 15-241 (D) (3) and ARS 15-241 (E) (4)} In order to comply with this requirement, the following change was made to the AZ LEARNS profile.

A school receives one scale score point if the percentage of English language learner students reclassified during the year across all grades served is greater or equal to 30 percent. Only groups of 16 or more student were evaluated for this point. Students included in this analysis were those identified as continuing English language learners (ELL), were continuously enrolled in the ELL program within the school for at least 150 calendar days, were not withdrawn from the program either due to Special Education criteria or by parent request, and passed ELL integrity within SAIS. ELL integrity is a multiple step process which includes, but is not limited to, requiring that:

- 1) the student be enrolled in the school
- 2) the student have a recent assessment indicating need for an ELL membership
- 3) the student is in a grade past preschool
- 4) the student be attending a public or charter school within Arizona
- 5) the student be attending a public or charter school within a public or charter LEA

8. Evaluating the Total Scale Score Value to Determine a School Classification

The tables below show the total number of scale score points that schools must earn in order to receive a given classification. A school may receive up to 18 scale points from status and growth; unlimited scale points from MAP if it is an elementary or middle school; a single point if it was able to reclassify 30 percent of its English language learners, and up to two graduation/drop out scale points if it is a high school. In 2009, the scale point a school could possibly receive if it made adequate yearly progress (AYP) was removed. To compensate schools who receive MAP points for the possible loss the AYP point, the formula for MAP points was adjusted. To compensate schools who do not receive MAP points for the possible loss of the AYP point, the profile performance thresholds were adjusted.

For each school, the applicable scale score cut points for classification labels are calculated by averaging the AIMS scale points received for each subject; adding the ELL point received; adding points from MAP if it is an elementary school; and adding points from the graduation/dropout rate if it is a high school. The classification cut points for elementary schools are given in the first two columns of table 8.1 and those for high schools are given in the first column of table 8.2. In order for schools to be classified as highly performing or excelling, there is an additional Z-score criterion that has to be met, which is explained in the next chapter.

| Table 8.1. Elementary School Classification Cut points | | | |
|--|------------------------|---------------|--------------|
| Profile | Performance Thresholds | | |
| | Scale with MAP | Non-MAP Scale | z-score |
| Underperforming | <13 | <7.7 | |
| Performing | 13 to 15.9 | 7.7 to 12.0 | NA |
| Performing Plus | 16 or more | 12.1 or more | NA |
| Highly Performing | 16 or more | 12.1 or more | 0.45 to 0.99 |
| Excelling | 19 or more | 14.1 or more | 1.00 or more |

| Table 8.2. High School Classification Cut points | | |
|--|------------------------|--------------|
| Profile | Performance Thresholds | |
| | Scale Points | z-score |
| Underperforming | <9.4 | |
| Performing | 9.4 to 14.6 | NA |
| Performing Plus | 14.7 or more | NA |
| Highly Performing | 14.7 or more | 0.45 to 0.99 |
| Excelling | 16.5 or more | 1.00 or more |

| Table 8.3. Combination School Classification Cut points | | | |
|---|------------------------|---------------|--------------|
| Profile | Performance Thresholds | | |
| | Scale with MAP | Non-MAP Scale | z-score |
| Underperforming | <14 | <9 | |
| Performing | 14 to 16.9 | 9 to 13.9 | NA |
| Performing Plus | 17 or more | 14 or more | NA |
| Highly Performing | 17 or more | 14 or more | 0.45 to 0.99 |
| Excelling | 20 or more | 16 or more | 1.00 or more |

Special Rules: Schools with no subject/grade combination with at least ten students meeting the selection criteria for the status measure in the current year were automatically assigned a “Performing” profile.

A combination (K-12) school that has insufficient students to be evaluated on MAP will be evaluated using the scale for high schools.

A combination (K-12) school that has insufficient students to be evaluated on graduation/dropout rates will be evaluated using the scale for elementary/middle schools.

9. Application of Threshold Criteria for Excelling and Highly Performing Schools

To ensure continued focus on improving the academic achievement of all students, including those students currently demonstrating proficiency, threshold criteria are applied to determine excelling and highly performing schools. To be deemed a highly performing or excelling school, a school must meet certain levels in the percentage of its students exceeding the standard on the AIMS. Schools must not only receive a total scale value that places them into either excelling or highly performing, but must also meet the requisite percentage of students in the exceeds-the-standard category on AIMS to be designated as either excelling or highly performing schools. The application of threshold criteria for excelling and highly performing schools results in the following scenarios.

1. A school that receives a total scale value that places it in the excelling classification and meets the requisite percentage of students in the Exceeds level on AIMS necessary for an excelling classification will be designated an excelling school.
2. A school that receives a total scale value that places it in the excelling classification and did not meet the requisite percentage of students in the Exceeds level on AIMS necessary for a excelling classification, but did met the requisite percentage of students in the exceeds category on AIMS necessary for a highly performing classification will be designated as a highly performing school.
3. A school that receives a total scale value that places it in the excelling classification and did not meet either the requisite percentage of students in the Exceeds category on AIMS necessary for the excelling classification or the highly performing classification will be designated as a performing school. Such schools are recognized with the non-statutory designation of performing plus.
4. A school that receives a total scale value that places it in the highly performing classification and meets the requisite percentage of students in the Exceeds category on AIMS necessary for an excelling classification will be designated as a highly performing school.
5. A school that receives a total scale value that places it in the highly performing classification and meets the requisite percentage of students in the Exceeds category on AIMS necessary for a highly performing classification will be designated as a highly performing school.
6. A school that receives a total scale value that places it in the highly performing classification and did not meet either the requisite percentage of students in the Exceeds category on AIMS necessary for an excelling classification or highly performing

classification will be designated as a performing school. Such schools are recognized with the non-statutory designation of performing plus.

7. A school that receives a total scale value that places it in the performing classification will be designated as a performing school, regardless if the school meets the requisite percentage of students in the Exceeds category on AIMS necessary for an excelling classification or a highly performing classification.
8. A school that receives a total scale value that places it in the underperforming classification will be designated as an underperforming school, regardless if the school meets the requisite percentage of students in the Exceeds category on AIMS necessary for an excelling classification or a highly performing classification.

The determination of whether a school met the goals for percent exceeding is based on a z-score calculated in the following manner:

1. For each school, the percent exceeding is calculated by grade across all three subjects for 2010 and for 2008 through 2010. The one-year estimation of percent exceeding gives credit to schools that have shown improvement in the percent of students exceeding the standard.
2. The percent-exceeding is converted into a z-score for each grade by subtracting the statewide average for that grade for percent exceeding and dividing by the statewide standard deviation for that grade. (These parameters are given in table 8.1)

Note: The same statewide parameters are used to calculate both the one-year and three-year z-score. This is because the purpose of the z-score is to create standard scores comparable across grades, not to create scores comparing a school's performance to the state norm. The z-scores are fixed parameters so if a school shows improvement over time its z-score will increase regardless of the movement of the state average over the same period.

3. The one- and three-year z-scores are averaged across all grades for a school. Each school will have two z-scores: one based on its three-year average for percent exceeding, the other based on the percent exceeding for the current year.
4. The higher of the one- and three-year averages are taken and compared to the performance thresholds. To be a highly performing school, the school must first meet its appropriate highly performing classification scale cut point, as explained in chapter 8, plus the average z-score for a school must be greater than or equal to 0.45. To be an excelling school, the school must first meet its appropriate excelling classification scale cut point plus the average z-score for a school must be greater than or equal to 1.00.

| Table 9.1. Parameters for Calculating Z-Scores | | |
|--|---------|--------------------|
| Grade | Average | Standard Deviation |
| 3 | 0.17 | 0.12 |
| 4 | 0.16 | 0.11 |
| 5 | 0.11 | 0.1 |
| 6 | 0.14 | 0.12 |
| 7 | 0.12 | 0.12 |
| 8 | 0.12 | 0.11 |
| 10 | 0.07 | 0.12 |

Example. The following table shows the third grade AIMS scores for Gila Monster Elementary over the past three years.

| Table 9.2 Number of Students Exceeding the Standard - 3rd Grade | | | | |
|---|-------------|---------|-------------|---------|
| Subject | Reading | | Mathematics | |
| Year | # Exceeding | #Tested | # Exceeding | #Tested |
| 2008 | 25 | 100 | 24 | 100 |
| 2009 | 24 | 105 | 23 | 105 |
| 2010 | 26 | 99 | 25 | 99 |
| Total | 75 | 304 | 72 | 304 |

The three-year average for percent of students exceeding the standard is:

$$\text{Percent Exceeding} = \frac{75 + 72 + 69}{304 + 304 + 304} = 23.6\%.$$

The one-year average for percent of students exceeding the standard is:

$$\text{Percent Exceeding} = \frac{25 + 25 + 24}{99 + 99 + 99} = 25.3\%.$$

The three-year z-score for third grade is:

$$z\text{-score} = \frac{.236 - .125}{.093} = 1.19.$$

The one-year z-score for third grade is:

$$z\text{-score} = \frac{.253 - .125}{.093} = 1.38.$$

Gila Monster Elementary serves grades K-6. The one- and three-year average z-scores for the entire school are:

| Table 9.3. Average Z-scores | | |
|-----------------------------|----------|------------|
| Grade | One-year | Three-year |
| K-2 | NA | NA |
| 3 | 1.38 | 1.19 |
| 4 | 1.02 | .86 |
| 5 | .89 | .72 |
| 6 | .95 | .80 |
| Average | 1.06 | .89 |

The highest z-score for Gila Monster Elementary is 1.06 for the one-year average. This z-score is greater than 1.00, so Gila Monster Elementary would earn an excelling — if it has earned sufficient scale points.

Special Rules: The minimum group size for computing z-scores is 16. If a school has less than 16 students with usable test scores for either the one-year or three-year calculation, then that z-score is not evaluated and the other is assigned. If a school has less than 16 students with usable test scores for both the one-year and three-year calculations then the z-score is not evaluated for the school.

For high schools, students who take an a subject test more than once during fall or spring testing within the time period (one- or three- years) have only their highest score used within the calculation.

10. AZ LEARNS Achievement Profile Appeals Process

Procedure and Timeline

In accordance with A.R.S. §15-241, school administrators are allowed the opportunity to appeal an achievement profile classification on behalf of the schools for which they are responsible.

Step 1: Data Correction. The first step in completing the AZ LEARNS Appeals Process required LEAs and schools to review their data in order to confirm its accuracy. Data correction took place March 15, 2010 through June 30, 2010. It is important to note that LEAs were solely responsible for verifying information for their schools. If an LEA did not verify the information for its schools through the correction process, the ADE assumed the schools on file and the data available were correct as listed.

Step 2: Substantive Appeal Submission. Administrators choosing to appeal an AZ LEARNS profile submitted appeals via e-mail to the Research and Evaluation Section during the specified appeal window. Substantive appeals were accepted from June 21, 2010 through June 30, 2010.

Schools were able to appeal AZ LEARNS profiles in two categories: data (statistical) and non-data (substantive) reasons – schools were not limited to one category and were able to appeal in both if necessary. Statistical appeals are appeals of the accuracy of the data used in the AZ LEARNS profile. Given the extensive time allowed to view and correct the data, it is expected that any errors should be corrected by the time preliminary profiles are released. Statistical appeals were not granted unless the underlying data was corrected. Substantive appeals are arguments by schools that that circumstances outside of the school’s control negatively affected school performance.

Administrators that chose to appeal an AZ LEARNS profile must have clearly articulated the issues they believe merited an appeal. Administrators must have submitted evidence that the issues they believe merited an appeal directly resulted in a *significant* decrease in student academic achievement as demonstrated on the AIMS. The evidence must have been submitted to ADE at the time the appeal was submitted. Failure to provide this evidence resulted in the appeal not being granted. Evidence submitted after the appeal deadline closed was not considered.

NOTE: In order to protect student privacy and the integrity of the appeals process, schools were asked to refer to a specific student only by that student’s SAIS ID. The SAIS ID was required so that ADE staff could verify the contentions in the appeal.

The ADE, if necessary, requested that a district or school administrator provide additional information/evidence to assist in the appeals process. Only those requests for additional information that were provided during the specified timeframe allotted were included in the

appeals process. Requests submitted after the specified timeframe were excluded from the appeals process. Unsolicited additional information submitted after the appeal deadline was not accepted.

Step 3: Appeal Resolution. After all appeals were submitted and the appeals window closed, the ADE began to process the appeals. Appeals were addressed categorically, not necessarily in the order received, so the fact that a district or school submitted its appeal during the first day of the appeal window did not mean it necessarily received a decision first during the resolution process.

Statistical appeals were resolved only through recalculation of the AZ LEARNS profile by ADE staff using any corrected data submitted by the school. The purpose of a statistical appeal is principally to advise ADE staff that data was in error and has been corrected. Calculations submitted by schools via an appeal were not taken at face value nor used to alter a profile if the underlying data was not corrected.

Schools that were labeled underperforming for a third consecutive year were entitled to a site visit to determine if the label was warranted. These site visits were important as the third year underperforming label merited an alternative designation of failing to meet the academic standards in accordance with statute. After the statistical review of appeals took place, schools labeled underperforming for the third consecutive time were scheduled to receive that visit. Teams from the Research and Evaluation and State Intervention sections of the ADE visited each of the third year underperforming schools to gather additional supporting data for the appeal as well as gather information related to the school's Arizona school improvement plan (ASIP) as required by statute. All information gathered from the site visits was taken to the substantive appeal committee for use in the third stage of the appeal process. Only third year underperforming schools received site visits as part of the appeals process.

Substantive appeals were resolved in a committee process. Committee members represented a diverse background of ADE staff and school administrators to ensure that appeals were considered from multiple perspectives. Appeals were evaluated using an appeals rubric approved by the State Board of Education that evaluated the argument presented and whether or not the evidence provided to support the argument was compelling. The appeals rubric consisted of a three-tiered system for appeal evaluation: 1) Initial review of the appeal to determine its merit. 2) Review of the evidence provided. 3) Committee recommendation.

Initial Review. The substantive appeal rubric provided for three categories that apply during the initial review. Each appeal was classified into the categories based on the information provided in the appeals.

- 1. Mitigating Factors Outside of the School's Control.*** Appeals of this nature referenced when the school indicated significant issues that affected test scores outside of the school's control. If a school provided information detailing a *significant* event that impacted test scores, which was clearly outside the school's control, the appeal was deemed as passing the initial review. Appeals involving the adverse affect of school or district policies; errors made by school or district personnel regarding test administration or data entry; or events whose impact could have been foreseen and mitigated by school or district action were not considered valid appeals.

2. ***Implementation of the School Improvement Plan.*** Appeals in this category discussed how the school was actively, consistently, and reliably implementing the school improvement plan; that the priorities of the solutions team had been addressed; the school improvement plan had been revised and updated to address assessed ongoing needs; and that professional development that supported the targeted goals had been planned and implemented. If a school provided information highlighting their school improvement plan, it may have accentuated the other two components on the rubric. However, per statute, a successful implementation of the school improvement plan alone cannot change a classification of a school. Additionally, only third-year underperforming schools may include information about their ASIP in their appeal.

Review of Evidence. Once the appeals progressed through the first tier of the rubric, *initial review*, the evidence provided to support the appeal was evaluated. In this tier, three determinations were possible:

1. ***Compelling evidence:*** In this area, the school or district adequately provided information that led the committee to conclude that, had the circumstance been different, the achievement profile would have been different as well. If a school had a special circumstance that affected a certain grade and was able to demonstrate that the specific grades test scores suffered, the school was deemed to have provided compelling evidence. Again, if a school provided compelling evidence highlighting their school improvement plan, it may have accentuated the other two components on the rubric (data calculations/mitigating factors). However, per statute, a successful implementation of the school improvement plan alone could not change the classification of a school.
2. ***Not compelling evidence:*** Appeals were categorized in this area when they were able to provide information that a significant issue *could* have impacted the school's performance but did not provide detailed, specific information as to specific outcomes that hindered the school's performance.
3. ***Not applicable evidence:*** If an appeal was submitted, made it through the initial review, and presented evidence that was not linked in any way to the performance of the school, the evidence was deemed not applicable. If the evidence did not directly support the claim made in the appeal, it was deemed not applicable.

Committee Recommendation. Once the appeal and evidence were reviewed, the committee arrived at a decision as to the outcome of the appeal. There were three possible outcomes:

1. ***Appeal granted and AZ LEARNS determination changed.*** In these cases, the appeal successfully made it through the initial review and evidentiary stages. It was determined that the points needed to change classifications would have been earned by the school had the special circumstance/data discrepancy not occurred. Therefore, the classification for the school was changed.
2. ***Appeal granted and AZ LEARNS determination remains the same.*** In these cases, the appeal successfully made it through the initial review and evidentiary stages. However, it was determined that the criteria needed to change classifications were not earned by the

school had the special circumstance/data discrepancy not occurred. For example, a school provided information and evidence that their AYP point was not accurately included in the calculations and the committee determined the school provided information to prove they earned the one point set aside for AYP in the AZ LEARNS formula. However, the school needed 5 points to get from underperforming to performing. Therefore, the one point earned was not enough to change their designation, so their determination remained the same.

3. ***Appeal Denied.*** In these cases, the appeal did not successfully make it through the initial review and evidentiary stages. Therefore, the classification for the school remained the same.

Step 4. Notification of Result Sent to Schools. Once all appeals were resolved, notifications were sent to the districts and/or schools that had filed appeals. The contact person of record for the district/school received an email from Achieve with directions as to how to access appeal information via the Common Logon when the appeal had been processed. Districts and schools were notified before the final public release of the AZ LEARNS profiles as to the outcome of the appeal process. All appeals were final.

11. AZ LEARNS Achievement Profiles for Alternative Schools

In 2004, the ADE published profiles for alternative schools for the first time. Alternative schools are defined as schools that meet the Board-approved definition as schools whose sole and clearly-stated mission is to serve specific populations of at-risk students. Alternative school status is granted by application to the ADE. A.R.S. §15-241 makes an allowance for a “parallel” evaluation method for alternative schools. When AZ LEARNS achievement profiles were first issued in 2002 the Board determined that alternative schools would not receive an achievement profile using the conventional AZ LEARNS methodology, and that ADE should develop an alternate method for evaluating these schools.

Definition of an Alternative School

The following is the definition of an alternative school as approved by the Board of Education in 2002. In 2010 there were 146 schools that were granted alternative school status.

1. A school operated by a school district must have adopted a mission statement that clearly identifies its purpose and intent to serve a specific student population (please see criterion three) that will benefit from an alternative school setting. A charter school must be expressly chartered to serve a specific student population that will benefit from an alternative school setting.
2. The educational program and related student services of the school must match the mission or charter of the school.
3. The school must intend to serve students exclusively in one or more of the following categories:
 - Students with behavioral issues (documented history of disruptive behavior)
 - Students identified as dropouts
 - Students in poor academic standing who are either severely behind on academic credits (more than one year) or have a demonstrated pattern of failing grades
 - Pregnant and/or parenting students
 - Adjudicated youth
4. Any school offering secondary instruction for academic credit used to fulfill Arizona State Board of Education graduation requirements (in part or in full) must offer a diploma of high school graduation.

General Process to Produce Achievement Profiles for Alternative Schools

The method for calculating an achievement profile for alternative schools is as follows:

1. AIMS scale score points are calculated using the status point calculation as for all other schools. Alternative schools do not receive points for improvement or MAP
2. Points based on an alternative school's dropout rate are calculated as for all other schools. Starting in 2009, dropout rate will be evaluated for all schools.
3. Alternative schools will only receive labels of performing and underperforming.
4. Schools service both elementary/middle and high school grades will receive a single profile.

Because of the uncertainty of measurement associated with small sample sizes and the high stakes of school labels, schools initially determined to be underperforming receive a "second look." Instead of determining baseline groups based on the mean percent of students passing AIMS, an alternate baseline group for these schools is determined based on the upper bound of a 95 percent confidence interval around the mean. If a school initially determined to be underperforming moves to a higher classification due to the "second look," that school will receive a performing label.

Calculation of an Achievement Profile for an Alternative School

The method used to calculate scale score points earned by alternative schools, regardless of the grades served, for these performance measures are the same as the methods used for other schools.

- A school may receive up to six scale score points for each subject. Due to the small size of alternative schools, status points are calculated using a multi-year average of scores. Starting in the current year, scores from previous years are averaged until the total number of scores is 32. The status points are averaged across grades and then summed across subjects.
- If a school may receive one point based on its dropout rate.
- The total points earned by a school are added up and compared to the school classification scale to determine a school's preliminary classification.

Classification Scales for Alternative Schools

The following classification scales are used for all alternative schools.

| Table 11.1. Alternative School Classification Cut Points | |
|--|--------------|
| | Scale Points |
| Underperforming | < 6.0 |
| Performing | 6.0 |

12. AZ LEARNS Achievement Profiles for K-2 Schools

When AZ LEARNS achievement profiles were first issued in 2002 the Board determined that K-2 schools would not receive an achievement profile using the conventional AZ LEARNS methodology, and that ADE should develop an alternate method for evaluating these schools. In 2004, the ADE published profiles for K-2 schools for the first time. K-2 schools are schools that serve only grades kindergarten through second grade. Since the AIMS is not administered at any of the grades served by these schools, the AZ LEARNS profiles are based solely on the performance of the schools' second graders on the state's norm-referenced test.

The method of calculating the profile for these schools is straightforward:

1. The average normal curve equivalents (NCE) on the reading and math portions of the test are calculated for the most current year for a school's second graders.
2. The average normal curve equivalents for the school are added together, and
3. Compared to a scale to determine the school's label.

Example. In 2010, the average NCE for second graders in Gila Monster Primary was 52 for math and 48 for reading. The two averages summed together yield $52 + 48 = 100$ points. This is sufficient for Gila Monster Primary to be a highly performing school.

Table 12.1 provides the performance thresholds for K-2 schools.

| Table 12.1. AZ LEARNS Scale for K-2 Schools | |
|---|-------------|
| Achievement Profile | Points |
| Underperforming | <70 |
| Performing | 70 to 96.9 |
| Highly Performing | 97 to 105.9 |
| Excelling | 106 or more |

Appendix I: Substantive Appeal Committee Evaluation Rubric for AZ LEARNs

| Evaluation Criteria | Initial Review (Please check the applicable option) | | | Review of Evidence Provided | Comments |
|--|---|--|---|--|----------|
| Data Calculation Discrepancies i.e., school attempts to compare data details with their data sets and gets different numbers | Not applicable | ADE data are accurate and calculations are correct. | Data does not match that of ADE. School submits evidence of discrepancies and provides additional data. | <input type="checkbox"/> Compelling evidence <input type="checkbox"/> Not compelling evidence <input type="checkbox"/> Not applicable evidence | |
| Special Circumstances Outside the Control of School/District Administration or Management i.e., school indicates significant teacher attrition; environmental issues/events; adverse testing conditions; school/community emergency/crisis | Not applicable | Special circumstances that were outside of the school's control, were not a substantial cause of the overall school performance. | School had a situation that was unavoidable and outside of the school's control and hindered the test administration or student performance. This situation resulted in adverse data for the year(s) in question. | <input type="checkbox"/> Compelling evidence <input type="checkbox"/> Not compelling evidence <input type="checkbox"/> Not applicable evidence | |
| Policy/Methodology Issues i.e., school disagrees with use of baseline | The ADE will not accept/review appeals related to policy/methodology. | | | | |

Appendix II: Substantive Appeal Rubric for AZ LEARNS

Team Decision AZ LEARNS Substantive Appeal

(Results represent group consensus regarding appeal)

| Reason Reviewed | Initial Review | | | Review of Evidence | | |
|---------------------------------------|--|-----------------------------------|-----------------------------------|--------------------|---------------------|-------------------------|
| Data Calculation Discrepancies | N/A | Correct data/calculation | Data does not match | N/A | Compelling evidence | Not compelling evidence |
| Special Circumstances | N/A | Did not cause overall performance | Adverse result based on situation | N/A | Compelling evidence | Not compelling evidence |
| Policy/Methodological Issues | The ADE will not accept/review appeals related to policy/methodology. | | | | | |

Please indicate appropriate response(s) by checking within the box(es) provided.

Committee Recommendation: Granted Denied

Final Appeal Decision: Granted Denied

Comments:

Appeal Result:

Appendix III: Substantive Appeal Committee Evaluation Rubric for AZ LEARNS (Failing Schools)

| Evaluation Criteria | Initial Review (Please mark the applicable option) | | | Review of Evidence Provided | Comments |
|--|---|--|---|--|----------|
| Data Calculation Discrepancies i.e., school compares data details with their data sets and gets different numbers | Not applicable | ADE data are accurate and calculations are correct. | Data does not match that of ADE. School submits evidence of discrepancies and provides additional data. | <input type="checkbox"/> Compelling evidence <input type="checkbox"/> Not compelling evidence <input type="checkbox"/> Not applicable evidence | |
| Mitigating Factors (incidents, situations, or events that impact the quality or quantity of data) i.e., school indicates significant teacher attrition; environmental issues/events; adverse testing conditions; school/community emergency/crisis | Not applicable | Mitigating factors that were outside of the school's control were not a substantial cause of the overall school performance. | School had a mitigating factor that was unavoidable, outside of the school's control, and hindered test administration or student performance. This resulted in adverse data for the year(s) in question. | <input type="checkbox"/> Compelling evidence <input type="checkbox"/> Not compelling evidence <input type="checkbox"/> Not applicable evidence | |
| Implementation of School Improvement Plan i.e., school is actively, consistently, and reliably implementing the school improvement plan; priorities of the Solutions Team have been addressed; the School Improvement Plan has been revised and updated to address assessed ongoing needs; professional development that supports the targeted goals has been planned and implemented. | Not applicable | School Improvement Plan was not implemented properly and/or gains were not made. | School Improvement Plan was properly implemented and school is making gains in growth. | <input type="checkbox"/> Compelling evidence <input type="checkbox"/> Not compelling evidence <input type="checkbox"/> Not applicable evidence | |

Appendix IV: Substantive Appeal Rubric for AZ LEARNS (Failing Schools)

Team Decision AZ LEARNS Substantive Appeal

(Results represent group consensus regarding appeal)

| Reason Reviewed | Initial Review | | | Review of Evidence | | |
|---|------------------------------|---|--|------------------------------|--|--|
| Data Calculation Discrepancies | <input type="checkbox"/> N/A | <input type="checkbox"/> Correct data/calculation | <input type="checkbox"/> Data does not match | <input type="checkbox"/> N/A | <input type="checkbox"/> Compelling evidence | <input type="checkbox"/> Not compelling evidence |
| Mitigating Factors | <input type="checkbox"/> N/A | <input type="checkbox"/> Did not cause overall performance | <input type="checkbox"/> Adverse result based on situation | <input type="checkbox"/> N/A | <input type="checkbox"/> Compelling evidence | <input type="checkbox"/> Not compelling evidence |
| Review of School Improvement Plan Implementation | <input type="checkbox"/> N/A | <input type="checkbox"/> School Improvement Plan not a factor | <input type="checkbox"/> School Improvement Plan demonstrates growth | <input type="checkbox"/> N/A | <input type="checkbox"/> Compelling evidence | <input type="checkbox"/> Not compelling evidence |

Please indicate appropriate response(s) by checking within the box(es) provided.

Committee Recommendation: Maintain AP Label (list label) _____
Alternative AP Label (list label) _____

Appeal Comments: